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ABSTRACT

Presented here are ideas for multidisciplinary environmental education. The suggestions are examples of ways in which environmentally beneficial learnings can be incorporated into the existing curriculum, and are intended to assist in the development of learning packages. Among the five overall objectives listed are: 1) to develop personal patterns of behavior and attitudes: reflecting and personalizing observation of natural patterns; learning to value objects through perception of their place in patterns; and, 2) to provide specific environmentally significant learnings in math, social studies, art, science, music, and language arts. The concepts of Pattern and Tree Succession are taught within the framework of the above subject areas in a three-step sequence: an introduction within the classroom (pre-site work); observation site work; and, application to student values (post-site work). One of the post-site activities suggested for the concept of tree succession in social studies is to imagine the development of a forest community around the tree represented by your wood slab, and draw pictures of how this community might have looked during five-year intervals. Then, compare the growth of the forest community with the growth of your community on the time continuum represented by the tree. (Author/JLB)

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HUXLEY COLLEGE
CENTER FOR ENVIRONMENTAL EDUCATION

A STUDY OF PATTERNS AND TREE SUCCESSION AS ENVIRONMENTAL EDUCATION

for intermediate grades

Susan Floyd

SP 002 612

Sedro-Woolley Project Report No. 2
October 1971
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Huxley College of Environmental Studies
A Division of Western Washington State College
Bellingham, Washington 98225

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HUXLEY COLLEGE
Environmental Education Project

A STUDY OF PATTERNS AND TREE SUCCESSION AS ENVIRONMENTAL EDUCATION

For intermediate grades

Susan Floyd
Huxley Center for Environmental Education
Sedro-Woolley Project Report #2
U.S.O.E. Project No. 0-0848
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TO THE TEACHER:

Presented here are ideas for multidisciplinary environmental education. The objectives of the ideas and methods suggested are clearly stated. The overall objective is to provide you, the teacher, with an aid in the development of your approach to teaching for and about the environment. These are not learning packages designed to be applied verbatim, but suggestions for ideas and methods that will enable you to develop learning packages. The contents of this report represent only the first treatment of the idea. It is published in this form in order that teachers may have an opportunity to experiment with it.

You will have to design your personal approach to environmental education. You are an environmental educator now, whether you realize it or not, because the environment is all around you and you are teaching about the environment that surrounds both you and your students. The state of the environment indicates that there is something wrong with the way in which you have learned to perceive and behave relative to the environment, and with the way you are teaching others to learn and behave in their environment today.

The ideas presented here are examples of ways in which you can incorporate environmentally beneficial learnings into your curriculum. The intent is not that you "add on" something specifically environmental to your curriculum, but that you incorporate environmental learnings into your treatments of the subject matter with which you have already been dealing. The specific manner in which you treat your responsibility to

educate for environmental stewardship is up to you. It is hoped that these and many other ideas will help you in your effort to understand the meaning of "environmental education" and its implications for you as a teacher and as a human organism.

The environmental education development project of which this report is a part is an ongoing one, and it is hoped that all who attempt to use the report will participate in the project by reporting the results of their efforts to the project staff. The staff will compile the ideas and methods collected. This will enable all working on the development of environmental education to share each other's work and will promote the spirit of cooperation essential to the success of any project as broad as this one.

Please report the methods and results derived from your use of this report to:

John Miles, Director
Environmental Education Project
Huxley College of Environmental Studies
Bellingham, Washington 98225

Thank you.

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A STUDY OF PATTERNS AND TREE SUCCESSION AS ENVIRONMENTAL EDUCATION

OBJECTIVES

1. To recognize the interrelatedness of all areas of knowledge.

2. To develop personal patterns of behavior and attitudes:

   - reflecting and personalizing observation of natural patterns;

   - learning to value objects through perception of their place in patterns, i.e., natural balanced systems, such as interdependent communities which evolve through patterns of biotic succession, and similar organizations of the world.

3. To develop a pattern in learning itself by introducing students to a learning strategy.

4. To provide specific environmentally significant learnings in math, social studies, art, science, music, and language arts.

5. To develop a teaching strategy that may be applied sequentially as a student increases his knowledge and understanding of his environment.

ACTIVITIES →

SUBJECTS ↓	(CLASSROOM)	(OBSERVATION SITE)	(CLASSROOM)
	PATTERNS Introduction 1. 3. 5.	Observation 1. 3. 4. 6.	Application to student values 2. 6.
	TREE SUCCESSION Introduction 2. 4.	Observation 1. 3. 4.	Application to student values 2. 6. 5.

In each of the above subjects, the final goal will be the ability of the student to apply the knowledge gained about natural processes to their personal behavior in human and natural systems and how these systems can, and must, be in balance. In achieving this goal, all subject areas are used. The subject skills used for each of the three steps are indicated by the numbers on the above chart.

1. Math
2. Social Studies
3. Art
4. Science
5. Music
6. Language Arts

PATTERNS

I. BASIC PATTERNS

A. Art forms

1. shape and balance
2. focus
3. size
4. color

B. Numbers

1. odd and even series
2. base ten pattern
3. repetition of digits
4. formulas

C. Music

1. scales
2. chords
3. rhythms
4. themes

II. PATTERNS IN NATURE

A. Shape

1. constellations
2. leaf vein structure
3. balance (symmetrical or asymmetrical)

B. Textures

1. bark characterization
2. rocks
3. protective textures

C. Colors

1. seasonal changes in plants
2. protection for animals
3. depth perception

D. Temporal

1. seasons
2. time involved in succession
3. cycles

E. Spatial

1. animal territories
2. spacing between trees for sunlight
3. leaf or needle spacing

III. ABSTRACT PATTERNS

A. Community

1. building shapes
2. construction materials
3. road designs
4. language patterns

B. Personality

1. cultural patterns and traditions
2. traits, actions, and personal habits
3. mental attitudes, beliefs, and values held in common by members of a group.

PATTERNS

In the lower grades, patterns can be used as a tool to help the student learn about and appreciate his surroundings. The ability to recognize patterns will help the student make his own discoveries outside of the classroom. Petterns can be seen in his community and in his family life, as well as in his own habits.

Perceptual skills are important to the student as he works with patterns. For example, sight is used to discover color. Sight and touch are used to discover texture, and hearing finds patterns in sound. Repeated patterns and abstract patterns, such as cycles of nature or community designs (building shapes, road patterns), use combinations of all the senses. As the exercises with patterns are followed and expanded, there should be a continual emphasis on sensory perception.

At first the class can work with very simple patterns of shape. Circles , squares, triangles, and line patterns can be used for art projects. These same shapes can then be found at the observation site and recorded. The teacher should help direct the observation by open-ended discussion. Are some shapes more numerous than others? Why are specific shapes used in nature, e.g., could the seed of a dandelion catch the wind better if it were shaped differently? Further motivation can be provided back at the classroom by projects which find and compare more shapes in the student's environment.

After the patterns of shape have been well developed, numbers can be worked with in the same way. First, work with the ways numbers are used through repetition of artistic designs and in math patterns. Then

at the observation site, find evidence of things that come in pairs or other consistent combinations. Also, sizes of various kinds of needles and leaves can be measured. Do these measurements follow a pattern? Why do these numbers follow patterns? Keep records of population sizes, e.g., of birds, mushrooms, snails, etc. The classes can maintain these for a given site from year to year during a given period of time. These records can also be used to find number patterns. Post-site projects can again be used to find how numbers affect the student's environment. Discussion questions might include, "Are there certain sized groups in which you feel most comfortable? How many people live in your community? How many people live in the largest city nearby, and how do the sizes of the two areas compare?"

The same sequence is followed with color, texture, and sound. First, finding as many examples of the pattern as possible, and doing projects to become familiar with these examples. Second, the on-site experience would lead to other discoveries of the same type of patterns and should explore the reasons why this color, texture, or sound is chosen by nature. Third, the post-site projects and discussions lead to an understanding of how the student can relate similar patterns to his own surroundings.

ACTIVITIES ——————————→

(CLASSROOM)	(OBSERVATION SITE)	(CLASSROOM)
PATTERNS Introduction 1. 3. 5.	Observation 1. 3. 4. 6.	Application to student values 2. 6.

1. Math
2. Social Studies
3. Art
4. Science
5. Music
6. Language Arts

PRE-SITE WORK WITH PATTERNS (MATH)

Activity

On the school playground the students can learn to measure and mark off a large square. To find the number of steps in one hundred feet, they can follow this sequence:

1. Mark off 100 feet on the school playground.
2. Walk that distance three times, counting the number of steps that it takes each time.
3. Write in your journal

   number of steps the first time _____

   number of steps the second time _____

   number of steps the third time _____

   total number of steps _____
4. Divide the total number of steps by 3 to find the average number of steps in 100 feet, and add this to your journal record.
5. Check your new step measurement by marking a 100 foot square in a new place on the playground and then check it with a yardstick.

Later, at the observation site, this technique can be used to measure a 100 foot square and to find the number of trees in this area. Other populations, such as the number and kind of birds or mushrooms in a given 100 foot square, could be measured and recorded to find seasonal changes of the area being studied.

PRE-SITE WORK WITH PATTERNS (ART)

Activity

The following activity can be done by the class as a whole or can be done by each student individually.

Draw one side of the classroom, using only four basic shapes--the square, rectangle, triangle, and circle; put in only as much detail as you can by using these four shapes. When this is done, count the number of squares, rectangles, triangles, and circles used in the drawing.

PRE-SITE WORK WITH PATTERNS (MUSIC)

Activity

Color can be used as an introduction to finding patterns within major scales. Beginning with the C major scale, a color is given to each note of the scale. Right away the students should notice that after every seven notes the colors repeat themselves. For each new scale introduced, the eighth color is always the same as the first and the series begins again.

This pattern can be developed to show not only the octave patterns, but also the half-steps and chords.

Discussion

What is it about music that helps you tell one song from another? Are some sounds easier to recognize than others? Why? How do sounds affect the way you feel? What is the difference between sounds and noise? What sounds do you hear most often? What kinds of noise do you hear most often?

ACTIVITIES ——————————————→

(CLASSROOM)	(OBSERVATION SITE)	(CLASSROOM)
PATTERNS Introduction 1. 3. 5.	Observation 1. 3. 4. 6.	Application to student values 2. 6.

1. Math
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OBSERVATION-SITE WORK WITH PATTERNS (MATH)

Activity

Divide the class into groups of four or five each. Then give each group a measuring tape and a piece of paper to record their measurements, and assign each group one or more of the following headings. The groups can then work on making and recording ten measurements for each heading.

a. circumference of Douglas Fir trunk

b. diameter of alder leaves

c. length of hemlock needles

d. length of fir needles

e. distance between alder leaves

f. distance between fir trees

g. distance between alder trees

h. number of Douglas Fir within a paced 25 foot square

Discussion

Read aloud the measurements taken by each group. Can you find patterns in the sizes and distances? Do these patterns serve a purpose?

OBSERVATION-SITE WORK WITH PATTERNS (ART)

Activity

Construction paper cut into circles, squares, rectangles, and triangles can be taken with you to the observation site. Each student will need a piece of charcoal and each shape of construction paper. At the site, let the students spread out and find objects of each shape. The object can be from the macro-system or from a micro-system, e.g., the circle may represent the general shape of a tree or the spore cases on the underside of a sword fern. Then, with the charcoal, each student can sketch the objects which he finds on the paper representing that shape.

Later, the same type of exercise could be done using irregular shapes. Another possibility would be to have the student take a piece of construction paper to an old stump and while exploring the stump, cut out the shapes found and write on the back a short description of the object.

Discussion

Which shape is found most commonly here at the observation site? In the classroom, which shape did you find most often? In the community in which you live? How does shape affect us? Would you feel differently if you were living in a round house instead of a rectangular house? Why?

OBSERVATION-SITE WORK WITH PATTERNS (SCIENCE)

Discussion (Follow-up on Art Activity)

Describe one of the objects which you used in your observation-site art project. What shape was it? Tell what purpose you think that specific shape might have. What advantages might that shape have over other shapes? What other living objects can you think of that have a shape for a specific function? Can you think of any shapes in nature that do not have a purpose?

Discussion (Follow-up on Math Activity)

What were some of the patterns that we found in the measurement exercise? Why are the trees fairly evenly spaced? What advantages would distance have? Do people space themselves in this way? Why?

Why are the needles or leaves on one type of tree all about the same size? Do you think they have certain functions which are taken care of best by that particular size?

Each student can keep a journal as a record of his observations and information collected. This will be easiest if the class is given a definite format to follow. The activities or observations may vary with the students, and this will be noted in the description section.

Name:

Date:

Time:

Weather:

Location:

Description:

ACTIVITIES →

(CLASSROOM)	(OBSERVATION SITE)	(CLASSROOM)
PATTERNS Introduction 1. 3. 5.	Observation 1. 3. 4. 6.	Application to Student Values 2. 6.

1. Math
2. Social Studies
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POST-SITE WORK WITH PATTERNS (ART AND LANGUAGE ARTS)

To value an object is to regularly or habitually feel a desire for that object. When I "like" something regularly, it has "value" to me. People value patterns; study of patterns provides you with an opportunity to point out to the children that they have a set of "likes" which is called a value system.

Activity

Draw a picture of the shape of this room, desk, group, book, paper, pencil, and anything else that comes in a schoolroom that you like. Write a short explanation of why you feel this way.

Discussion

What shapes do you like? Do you always like a shape or do you like it better in one place than in others? Why do you think you feel this way about shapes?

If you could choose the shape of this room and all of the things in it, what shapes would you choose?

POST-SITE WORK WITH PATTERNS (SOCIAL STUDIES)

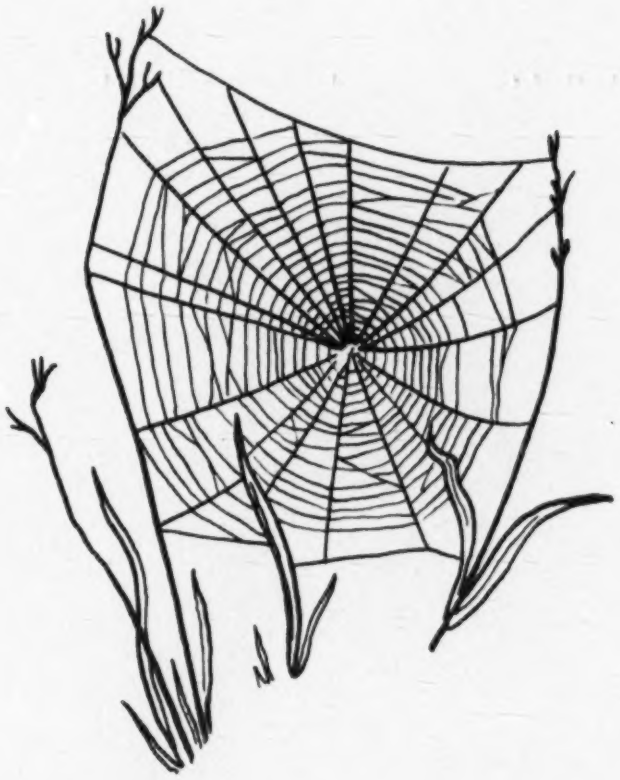
Activity

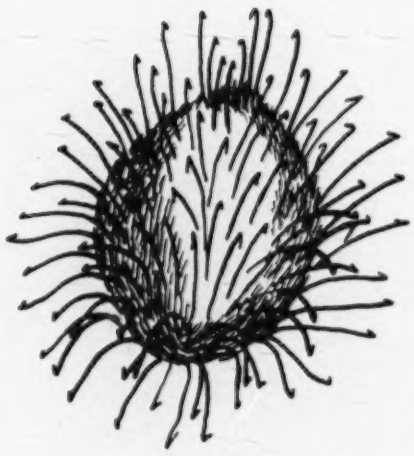
Have each student compare the shapes which are found in the classroom with the shapes which he found at the observation site.

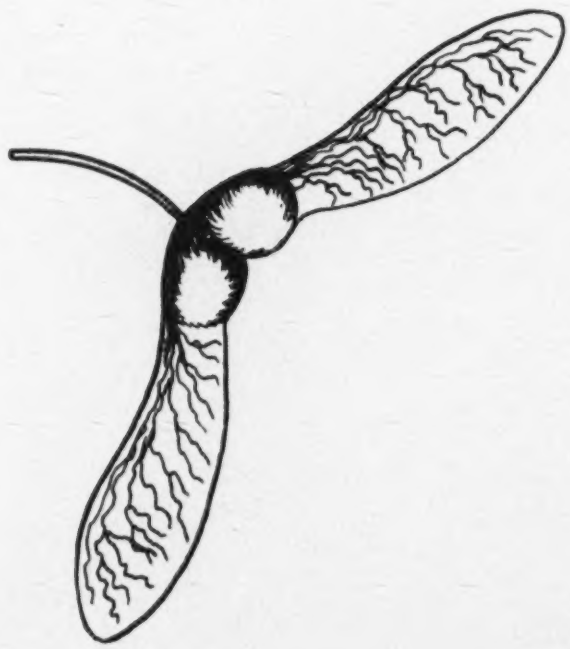
Discussion

Which shapes occur most often in the classroom? Is this the same shape that occurred most often at the observation site? Why or why not? How do shapes affect your feelings? Can carefully planned patterns or shapes change your community?

This same kind of activity and discussion can be done with patterns of numbers, textures, and colors. As the students become familiar with these concrete ideas of simple patterns, work toward more abstract ideas. These might include repetition which they can find in the classroom schedule, in their study habits, or in the changes of their activities through the seasonal changes. Further recognition of patterns can develop out of a study of their community.







Why is each shape the best for that object? Draw other shapes you would find in your community and explain the reason for these shapes.

TREE SUCCESSION

TREE SUCCESSION

BACKGROUND

Each forest has its own story to tell. The story is one of many communities working toward a final stable community. The conditions of a given region, the basic patterns of life, repeat themselves. The order of events can be discovered and developments can be predicted. The students must understand this succession of forest life if they are going to understand man's relationship in the balance of nature.

Life that exists within this stable climax community varies with the conditions of the area. On the Pacific coast, there are forests of fir, spruce, hemlock, cedar, and others of redwood. The Rocky Mountain area is dominated by forests of pine, fir, and spruce. Moving to the mid-west, we find that prairie grasses, not forests, are the most stable form of vegetation. Long-leafed pine makes up the forests of the warmer areas along the coasts of the south Atlantic, and large forests of beech/maple and oak/hickory dominate the eastern half of the United States.

Climax communities do not always stay the same, however. Some are cleared for timber or farm land. Other communities may be lost through landslides, fire, or flood; when this occurs, a whole new series of changes will begin.

The student can become aware of man's relationship to the series of changes which will always be working toward a climax community.

To look at the whole forest development series, we can begin with an undisturbed open area. This area could be the completely filled-in

bog area, or it might be the field of an abandoned farm. If this area is in the Pacific northwest, it will be developing toward a fir, spruce, hemlock, and cedar community. The first plants to appear will be those that tolerate direct sunlight. Many small plants such as grasses and dandelions will grow during this stage. Maples and alders will be the first trees that follow. As these develop, they prepare the way for those that will replace them. A rich mulch on the ground is being built up by the dead leaves and by the animals that are living in this community. New seeds are brought in by wind, animals, and birds. When the soil and light conditions are right, hemlocks and the other conifers will begin to grow and will then crowd out the alders which needed direct sunlight. Living and dying trees and animals will remain in a definite pattern until some outside force disturbs this balance.

The students will be able to find many patterns exhibited by succession. The soil, sunlight, moisture, and temperature conditions are predictable. A succession of plants and animals occurs in sequence. These biotic elements organize themselves spatially, competing for sunlight and moisture. There is, in short, a general, recurring organization of the community.

Students can study these patterns by analyzing many parts of it. What plants occur? How far apart are they? How high are they? When do they grow the fastest? Why? They will also gradually realize that the patterns exist at all levels, and in addition to the ones mentioned above, there are many cellular and minute organizational patterns. These could be studied later as a follow-through for the activities described in the following section.

As the students work to discover the pattern in their own area, many people in the community will be able to help them. Farmers will let them examine fields that have been recently plowed or that have been left fallow for several years. Forest Service personnel can show the students areas that have been cut at several different times. Perhaps they will want to see an area cut during the last year, one logged five years ago, another ten years old, and a virgin stand. An "old timer" in the area may be able to tell the class how the area has changed during his lifetime.

On the trees of the community, the students will be able to find many more relationships. Nests of various animals are protected by the trees. Some are built at the base of the trunk, or in holes high on the trunk, and some in the branches. Beetles may be living under the bark of the trees and aphids and caterpillars on the leaves. Lichens or fungus could be growing on the bark of these trees and ferns can be found where moss and leaves are collecting on the damp trunk. The students should not stop with the discovery of the tree relationships, but should go on to analyze the reason why these relationships fit in with the community pattern. For example, follow the pattern made by the bark beetle. Why do you think it makes that pattern? How do you think the bark beetle lives?

Even more discoveries can be found on a log or stump after the tree has fallen. Many plants and bugs will be helping the breakdown of the wood into new soil. More animal homes can be found here too. Skunks or bear may make their homes in the hollow trunk. A fox's den may be in the hole where the roots once were, and many smaller insects will be living under the bark or in the damp leaves at the base of the log.

ACTIVITIES ——————————→

(CLASSROOM)	(OBSERVATION SITE)	(CLASSROOM)
TREE SUCCESSION Introduction 2. 4.	Observation 1. 3. 4.	Application to student values 2. 5. 6.

1. Math
2. Social Studies
3. Art
4. Science
5. Music
6. Language Arts

PRE-SITE WORK WITH TREE SUCCESSION (SOCIAL STUDIES)

Activity

Classes can keep a record of the changes of the land in their area by collecting news articles and making a scrapbook for the room. At the very beginning of the year, start the project by telling the students some of the very early history of the area around the school and have them discuss how the area must have changed to its present status. If you know some old timer from the area, have him come in and relate to the class what the area used to be like.

Then bring in some news articles which show some present changes such as new buildings or highways in the area, a landslide, flood, or earthquake, and ask them all to see if they can find one article from the newspaper to show some change in the area. Once they catch on to the type of articles needed, they can bring them in on their own initiative and write their names and dates beside each addition to the scrapbook.

Later in the year, a national land change section and an international land change section can be added. The area for your grade level in social studies can also be stressed in the book.

PRE-SITE WORK WITH TREE SUCCESSION (SCIENCE)

Activity

In the area around the school, see how many different types of trees the class can find. Stop at each new tree and have the students describe the branching pattern, the general shape of the tree, the leaf vein pattern, or arrangement of the needles, and the texture and color of the bark. At first, only the description of the tree's characteristics is needed, not the identification. Also involve the whole class in describing the type of area in which the tree is growing. For instance, it could be growing on a dry hillside or at the edge of a river, in open sunlight, or in a spot shaded by other taller trees.

The objective here is to have the students able to describe all of the characteristics of a tree and not only the leaves or needles. Also the students should realize and be able to list several different types of growing conditions in which different trees exist.

Student Project

Each of the students should create his own project in which he learns to identify and give the characteristics of the trees which are involved in the succession toward the climax growth of his area. He should also identify the main causes of change or disturbance of the climax growth. How has man affected the growth of the area? How is man working to regulate growth?

ACTIVITIES →

(CLASSROOM)	(OBSERVATION SITE)	(CLASSROOM)
TREE SUCCESSION Introduction 2. 4.	Observation 1. 3. 4.	Application to student values 2. 5. 6.

1. Math
2. Social Studies
3. Art
4. Science
5. Music
6. Language Arts

OBSERVATION-SITE WORK WITH TREE SUCCESSION (MATH)

Activity

The noting of numbers of the various types of trees and the comparison of their numbers at different times in the succession of growth will be important in the understanding of succession ideas.

This activity will be most successful with several observation sites, each at a different stage of growth toward a particular climax community. The students can divide into groups to make these number measurements. One group can measure and mark a one-hundred foot square area; several other groups will be needed to take a count of and record the number of each type of tree within that area.

When this has been done at each of the different aged sites, the count should be given to all of the students and they can each find the percentages of each of the types of trees at the different stages.

A volunteer group of students could then make overlay graphs to show the successive percentage of the different types of trees all together.

OBSERVATION-SITE WORK WITH TREE SUCCESSION (ART)

Activity

Pick one of the early growth observation sites and have each student make sketches of how the area looks at its present growth stage and of how it will look in twenty years. These sketches can be kept in the students' journals which were begun at the observation site for patterns and which should be continued through all observation site work.

As a type of evaluation at the end of the tree succession project, have the students do the same type of sketches at the site again. Their concept of the types of trees which will be growing in a forest of a given age should be fairly well developed at the end of the project. They may also show a greater ability to draw the various types of trees after the extended work with tree characterization in the pre-site student project.

Discussion

What interactions do you think that man will have with this site during the next twenty years? How near is this area to a major population center? How fast is that area expanding? Will the need for this site increase as the population center continues to expand? How?

OBSERVATION-SITE WORK WITH TREE SUCCESSION (SCIENCE)

Student Project

For this project the student will need two observation sites. One will be a garbage dump, and the other a stump or old log.

The stump will present many varieties of breakdown organisms which are new to the students. Look for mushrooms, fungi, mosses, lichens, insects, bugs, and other animals living in or around the stump. These things, as well as weather forces, help to break the dead wood into nutrients which will again be used in the cycle of succession. Discuss the cycle of tree birth, growth, death, and breakdown. What living things use the trees at different stages? In which stages do men use the trees?

At the dump find all the processes which will help break down any of the materials found. Direct the students' attention also to the objects that do not break down or take a long time to disintegrate. Explain how man has developed many methods to keep the natural erosive forces from working on products such as glass, metal, or plastic.

After the students have compared the breakdown processes at both sites, have them gather more information about the disintegration of man-made products.

ACTIVITIES ——————————————————→

(CLASSROOM)	(OBSERVATION SITE)	(CLASSROOM)
TREE SUCCESSION Introduction 2. 4.	Observation 1 3. 4.	Application to student values 2. 5. 6.

1. Math
2. Social Studies
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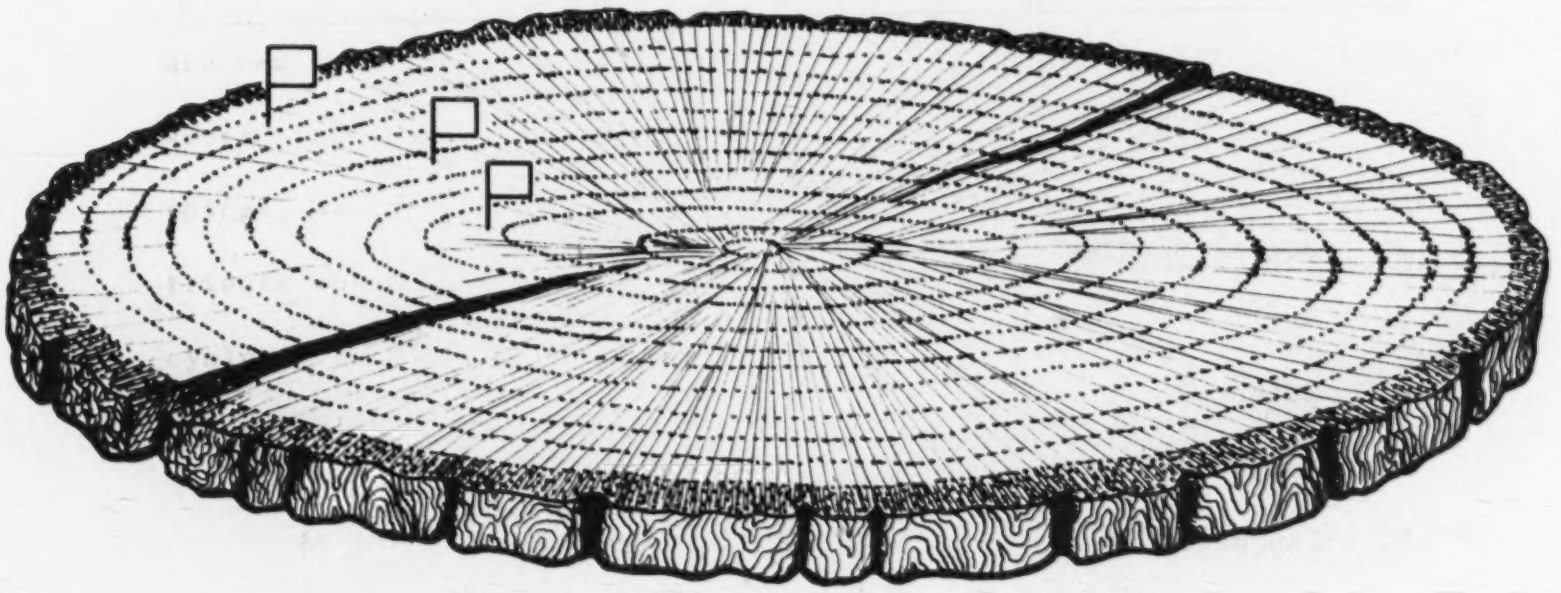
POST-SITE WORK WITH TREE SUCCESSION (SOCIAL STUDIES)

A Time Guide Within the Tree's Growth Rings



A time guide of your community's growth can be related to the yearly growth rings shown in a slab of wood. The students label the growth rings by year, beginning with the most recent growth at the outside and moving toward the center, with each ring representing one year. The dates are written on the small paper and pin flags, and also on an accompanying chart. Then it is up to the students to find the events that changed the community during each of those years, and to fill in the chart. These events may have been detrimental to the community, such as forest fire, flood, and drought, or may have been related to building progress, such as new industries, farm clearing or road building.

POST-SITE WORK WITH TREE SUCCESSION (SOCIAL STUDIES)

Activity

Imagine the development of a forest community around the tree which is represented by your wood slab, and draw pictures of how this community might have looked during five-year intervals. Then, compare the growth of the forest community with the growth of your community on the time continuum represented by the tree.

Discussion

In what ways could the growth of the forest community have affected your environment? Could the growth of your community have affected the forest? How have the forest communities helped man during this period of growth? How has your community helped man during this time?

POST-SITE WORK WITH TREE SUCCESSION (LANGUAGE ARTS)

Activity

Have the students write a prose description of the observation site, using words which they do not normally use to describe common objects such as trees, rocks, streams, and sky. The class can be encouraged not to tell the reader directly what they are writing about, but only through the use of sensory imagery and new descriptions of common objects. For example, a student could define a valley with a river at the bottom as a trench with a pathwinding sheet of glass, or the sky as the dome of our sphere.

This assignment can be made easier for the students if they are given a phrase or a choice of phrases with which they can begin. The following samples of student writing were begun with "Here I stand . . .." Other beginnings might be "Slowly, as I walk . . .," "Listen, just listen . . .," or "Stirring through the cobwebs of my mind . . .."

Surprising results can be achieved by fifth graders in creative writing. For the following examples, the suggestion was made to the students that they could begin with "Here I stand," and then imagine themselves in a beautiful place and describe their feelings or surroundings.

Here I stand in the bareable world.
Thinking of the green forest and the blue skies--
Watching the stream of clear water flow by--
Smelling the freshness of the clean air in the sky.
As I lifted my head I could see the glittering snow and
wondered if it was going to stay that way. I knew it
would if you would care.

Ronnie Eldridge
Fifth Grade
Sedro-Woolley, Washington

Wake Up World

Here I stand, glancing into a tunnel of time. I
can see creations that have not yet been tortured to ugliness.
The beauty astounds me:
the pure white snow covered mountains,
fascinating valleys filled with nothing but living loveliness.
Why can't the rest of our dimension be like this? Why
don't all the people care? Will Earth be destroyed? No!
Our dimension is going to stay alive with all its might,
and we're going to help it. Will you?

Kris Eberli
Fifth Grade
Sedro-Woolley, Washington

Here I stand, sightseeing. Toward the unsurfaced place. Hard to know why, yet, it isn't. It's coming up. It's so much better. This hasn't been tracked.

From afar, many triangles and flats. It's easy now. The greenness of it all. It's right here. Just some little places on the crust. Every bladed thing below has its right to be green. Across the non-bladed into the bladed I strive. It's not going to be unliving either. The wetness that expands into the natural fields of the future. Dropping down the high greens. Now gone swiftly toward the future, where it will rest peacefully.

Dena Cole
Fifth Grade
Sedro-Woolley

Majestical

Here I stand. I spy this flooding vain of liquid.
The majestic land I know.

The pale and dark colors tower above and below. I see myself in the pure vains of liquid. The dome of our sphere is pale; it's glare so delicate on the faces of the creatures in this wonderful land.

The sheer joy of being human strikes me!
Untouched by damage stands this land I know so well.
The blades of green I touch so often with lovingness and care. Entering God's masterpiece, other living things, human or not, will live, love, perish, and otherwise.

The tremendous Land of Great!

Mandy Burnett
Fifth Grade
Sedro-Woolley, Washington

POST-SITE WORK WITH TREE SUCCESSION (MUSIC AND LANGUAGE ARTS)

Activity

The students can develop a presentation of their creative writing to be given to their parents or to other students. In this presentation, the students read their own writing and tape record it against a background of music. Slides of the subjects in the writing can be shown along with this tape.

To begin working with the tape, the students should first pick five or six pop tunes which have the same themes as their writing. Then, as they read each selection of written work aloud to the class, the class can decide with which music that reading fits, and make a list of the order of songs and the order of readings under each song. Each student will need to practice reading his work very slowly and with expression. For the tape, the recording microphone can be held toward the record player with the volume up and then given to the student as the volume is faded. Several practice sessions may be required before the final tape is made.

The students are proud of having their work fit into a final production which seems quite professional with the use of music and tape. By working with readings and music together, the students learn to find themes and main ideas in the words of both, and to recognize that serious ideas fit with slow and more serious music, while other ideas fit with a lighter style of music. The students also have a chance to learn about expression in reading, and if slides are used, he further identifies main ideas to be represented by these slides.